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AMENDED CLAIMSAMENDED CLAIM 1

1. A process for surface treatment of mineral materials including at least the following steps

- a) Effect of laser radiation onto the surface and
- b) Application of an organo-silicide composition onto the surface,

with the above-mentioned steps (a) and (b) being part of a treatment process essentially limited in time and which occur prior to further processing and/or use of said mineral materials.

AMENDED CLAIM 10

10. A mineral material produced according to a process of claims 1 through 9, characterized in that it is provided with

- A) laser induced surface indentations, a laser induced surface removal and/or a laser induced smoothening of the surface and
- B) an organo-silicide composition onto the surface and/or in the pore space of the mineral material near to the surface.

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AMENDED SHEET

... superfine dust particles deposit, partially adhering tightly. In some processes, it is also disadvantageous that the slip resistance is only achieved subsequent to a post treatment at the point of use.

From DE 195 18 270 a surface treated, slip resistant floor covering is known that does not show some of the above-mentioned disadvantages. Such a floor covering is produced by applying statistically distributed micro craters, invisible for the human eye, onto the surface of the floor covering by means of a laser.

From DE A 2 053 110 a process for treating mineral surfaces is known with the surface initially being hydromechanically and subsequently treated with organo-silicide compositions causing hydrophobic effects. However, surfaces treated in such a way are not provided with the desired stain resistance.

The object of the invention is to provide highly slip resistant, stain resistant, and durable, wear resistant, weather resistant, free of fine dust, and optionally, refined surfaces, e.g., by means of polishing, made from mineral materials which are not provided with any of the disadvantages of prior art.

The object is attained according to the invention by providing a process, having at least two steps, for treating the surface of mineral materials, which comprises the following steps:

- a) Laser radiation affecting the surface and
- b) Application of an organo-silicide composition onto the surface.

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The object of the surface treatment are mineral materials such as: natural stones, artificial stones, e.g., mineral agglomerates of resin compositions or cement compositions, ceramics or ceramic materials, earthen ware, or stone ware. The above-mentioned steps are preferably parts of a treatment process, essentially limited in duration, and occur prior to further treatment/utilization as a mineral material/construction material.

The object of the process according to the invention can be untreated or pretreated mineral materials. Part of the pretreatment of the surface can be a surface treatment by means of blasting, singing, kerneling, coating, rough charging, sawing, cutting, and/or etching, as mentioned above. Furthermore, prior to one of the above-mentioned steps (a) and (b) according to the invention, the surfaces are advantageously cleared of loosely adhering particles by means of a mechanical surface cleaning, such as brushing, washing or blowing.

Work pieces treated this way, if necessary, are exposed to the laser treatment of step (a) in the following described in detail.

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